Remarks

Claims 1-15 are pending in this application. Claims 16-23 have been cancelled herein. The examiner has rejected each of claims 1-15 under 35 U.S.C. § 102(b) as being anticipated by "System Development for Profiling Deeper Waters in Support of the Oil and Gas Industry" by Romeo et al.

A. A Rejection Under Section 102(b) is not Proper Unless Each Element of the Claims is Disclosed in a Single Prior Art Reference

To anticipate a claim, the reference must teach every element of the claimed invention. Manual of Patent Examining Procedure 2131. "The identical invention must shown in complete detail as is contained in the . . . claim." MPEP 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir 1989). Thus, for the Examiner's rejections to be proper in this application, Romeo must teach every element of the claimed invention, in as much detail as is present in the claim. Romeo does not meet this standard with respect to the pending claims of the present application.

B. The ROV of Romeo Does not Anticipate the Claimed Invention

Romeo does not disclose the use of an ROV that (a) collects data while moving in the vertical direction in the water column and (b) is coupled to an ADCP. Neither does Romeo disclose an ADCP that collects data while moving in the vertical direction in the water column.

The Examiner's reliance on Romeo for the various ROV limitations in the pending claims originates from two references to an ROV in the text of Romeo. The first instance is in the last full paragraph on page 1 of Romeo:

> Requirements for current information include: riser deployment, vessel/rig selection, and ROV operation, station holding, and ship selection. Requirements like these have lead the industry to demand real time current measurements throughout the water column.

(Romeo, page 1). This section of Romeo does not teach the ability of an ROV to collect data while moving in the water column. This section of Romeo also does not teach the coupling of an ROV to an ADCP. Instead, this section plainly refers the *dependence* of an ROV on information concerning water currents.

That this portion of Romeo concerns only the *usefulness* of water current information in the operation of an ROV is readily apparent from the other items listed alongside an ROV in the quoted passage: riser deployment, vessel selection, rig selection, station holding, and ship holding. No one would argue that the mere mention of "rig selection," for example, indicates that "rig selection" discloses the collection of water current data while "rig selection" is moving in a water column. Instead, the listing of the items confirms that those listed items are items who successful use or operation is dependent upon having accurate water current data. Although this passage of Romeo may disclose that the operation of an ROV is aided by water current data, the does not disclose an ROV that is operable *to collect* water current data while moving in the water column or an ROV that is coupled to an ADCP.

The Examiner's second citation to ROV language in Romeo is found in the first paragraph following "Software" on page 8.

> [The] software package provides the user with a series of readily interpreted graphical views of the measured data. The instantaneous profile plot, shown in Fig. 15, illustrates measured current speed and direction in each depth cell. It also provides a clear, numerical display of the maximum current speed through the water column. This screen is of particular interest to ROV operators.

(Romeo, page 8). Similarly, this passage of Romeo does not disclose an ROV that is capable of collecting data while moving in the vertical direction in a water column, and neither does this passage disclose an ROV that is coupled to an ADCP. Rather, this passage instead discloses that

an ROV operation would be interested in knowing the speed of the current in the water column. There is no indication whatsoever in this passage that it is the ROV of Romeo that is actually collecting the data in the water column. Rather, as plainly disclosed in Romeo, an operator of a water column would simply benefit from water column data collected by the ADCP disclosed in Romeo. ("This screen is of particular interest to ROV operators.") There is no indication that the data of the screen was collected by the ROV or that the ROV of Romeo is coupled to an ADCP.

These passages of Romeo disclose only the usefulness of water current data for an ROV operation; these passages, nor any other portion of Romeo, do not disclose the collection of data by an ROV or the coupling of an ROV to an ADCP. This disclosure is simply not present in Romeo.

C. Romeo Does Not Disclose or Suggest Elements of Claim 1

As described in the preceding Section B, Romeo does not disclose critical elements of Claim 1.

1. "an ROV . . . operable . . . to collect data while moving in the vertical direction in the water column"

Claim 1 includes the element of "an ROV . . . operable . . . to collect data while moving in the vertical direction in the water column". Nowhere in Romeo is there disclose the ability of an ROV to collect data while moving in the vertical direction in the water column. Although Romeo may disclose that an operator of an ROV may be interested in knowing the water column, Romeo does not disclose the ability of an ROV to *collect* data while moving in the water column.

2. "an ADCP coupled to the ROV"

Claim 1 includes the element of "an ADCP coupled to the ROV". This element is not disclosed in Romeo. Nowhere in Romeo is there any mention of the coupling of an ROV to an ADCP.

3. "an ADCP . . . operable to move in a vertical direction in a water column and to collect data while moving in the vertical direction in the water column"

Claim 1 includes the element of "an ADCP . . . operable to move in a vertical direction in a water column and to collect data while moving in the vertical direction in the water column". Although Romeo disclose the use of an ADCP, Romeo does not disclose the ability of an ADCP to collect data while moving in the vertical direction in the water column. The Examiner cannot point to a disclosure in Romeo concerning the ability of the ADCP to collect data while moving in the vertical direction in the water column.

The Examiner should recognize that the ability of an ADCP to collect data concerning an entire water column while in a stationary position at or near the platform of an oil rig is not the same as collecting data concerning an entire water column *while moving* in the water column. Although Romeo does disclose the use of an ADCP for the measurement of water currents, Romeo does not disclose the collection of data concerning these water current while the ADCP is moving in a vertical direction in the water column.

4. "a computer system for receiving and processing . . . the collected ROV data . . . as the ADCP and ROV are moving in the vertical direction in the water column"

Finally Claim 1 includes the element of "a computer system for receiving and processing . . . the collected ROV data . . . as the ADCP and ROV are moving in the vertical direction in the water column". This element is not disclosed in Romeo. Romeo does not

disclose a computer system that processes data collected by an ROV. Although Romeo may disclose a computer system that processes data collected by an ADCP, there is teaching in Romeo for a computer system that processes data collected by an ROV. Although the ROV of Romeo certainly benefits from data processed by a computer system, there is no showing whatsoever that this data was collected by Romeo.

Because the foregoing elements of Claim 1 are not disclosed or taught by Romeo, Romeo does not anticipate Claim 1 and the rejection of Claim 1 should be withdrawn.

D. Romeo Does Not Disclose or Suggest the Elements of Claim 8

As described in the preceding Section B, Romeo does not disclose critical elements of Claim 8.

1. "receiving depth and heading data from an ROV as the ROV is moving in the vertical direction through a water column, the data being representative of and associated with a depth cell of the water column being traversed by the ROV"

This element of Claim 8 is not shown in Romeo. Nowhere in Romeo is there disclosed the method step of receiving depth and heading data from an ROV as the ROV is moving in the vertical direction in the water column. This disclose is simply not present in Romeo. Although Romeo may disclose an ROV that benefits from collected data concerning a water column, there is no indication that the ROV of Romeo is the source of this data.

2. "the ADCP being coupled to the ROV"

This element of Claim 8 is not disclosed in Romeo. Nowhere in Romeo is there any mention of the coupling of an ROV to an ADCP.

3. **"receiving from an ADCP as the ADCP is moving in the vertical direction through a water column water current velocity data, the ADCP being coupled to the ROV and the water current velocity data being representative of and associated with a depth cell of a water column being traversed by the ADCP"**

Although Romeo disclose the use of an ADCP, Romeo does not disclose the step of claim 8 of an ADCP collecting and transmitting data while moving in the vertical direction in the water column. The Examiner cannot point to a disclosure in Romeo concerning an ADCP that collects data *while moving* in the vertical direction in the water column.

As described above with respect to Claim 1, the ability of an ADCP to collect and transmit data concerning an entire water column while in a stationary position at or near the platform of an oil rig is not the same as collecting and transmitting data concerning an entire water column *while moving* in the water column. Although Romeo does disclose the use of an ADCP for the measurement of water currents, Romeo does not disclose the collection and transmission of data concerning these water current while the ADCP is moving in a vertical direction in the water column.

Because the foregoing elements of Claim 8 are not disclosed or taught by Romeo, Romeo does not anticipate Claim 8 and the rejection of Claim 8 should be withdrawn.

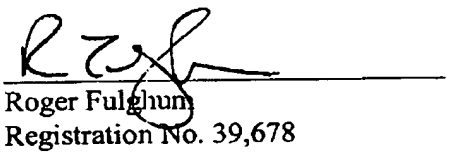
E. Claims 2-7 and 9-14

Claims 2-7 and 9-14 will not be discussed in this application, as each of claims 2-7 and 9-14 depends, either directly or indirectly, from an otherwise allowable base claim.

Conclusion

Applicant respectfully submits that pending claims 1-15 of the present invention, as amended, are allowable. Applicant respectfully requests that the rejection of these claims be withdrawn and that these claims be passed to issuance.

Respectfully submitted,



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